UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/583,629	05/31/2000	Samuel A. Cooper	15676-223495	4026

33072 7590 04/28/2004

KAGAN BINDER, PLLC
SUITE 200, MAPLE ISLAND BUILDING
221 MAIN STREET NORTH
STILLWATER, MN 55082

EXAMINER	
RUTLEDGE, DELLA J	

ART UNIT	PAPER NUMBER
2851	

DATE MAILED: 04/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/583,629	COOPER ET AL.	
	Examiner	Art Unit	
	D. Rutledge	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 30 are rejected under 35 U.S.C. 102(b) based upon a public use or sale of the invention.

The applicant's Information Disclosure Statement filed on 19 July 2002 and arguments against a "for sale rejection" has been considered, but was not found persuasive.

The reasons for the rejection based on a public sale or use of the invention are as follows:

A) With respect to an on sale bar, Pfaff v. Wells Electronics Inc., 48 USPQ2d 1641 – 1647 (hereinafter, "Pfaff"), defines what an "invention" is, defines the critical date for determining if a sale has occurred as the applicant's filing date, and provides a two prong test to determine if a commercial sale has occurred.

1.) Pfaff on page 1642 states that "the primary meaning of "invention" in the Patent Act unquestionably refers to the inventor's conception rather than a physical embodiment of that idea. The statue contains no express "reduction to practice" requirement, see Section 100, 101, 102(g), and it is well settled that an invention may be patented before it is reduced to practice."

2.) Pfaff on page 1642 states the "the Court of Appeals concluded, among other things, that Section 102(b)'s 1-year period began to run when the invention was offered for sale commercially, not when it was reduced to practice."

3.) Pfaff on page 1642 provided a two prong test to determine if a commercial sale has occurred. "The on-sale bar applies when two conditions are satisfied before the critical date. First, the product must be the subject of a commercial offer for sale....Second, the invention must be ready for patenting. That condition may be satisfied in at least two ways: by proof of reduction to practice before the critical date; or by proof that prior to the critical date the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention."

B) The applicant admits that a FSI POLARIS® 2500 (hereinafter, "The System") having Synchronization control software and hardware for spin coating a photoresist at a "coat station" was delivered for sale to a third party in January 1999. The applicant also admits that the "The System" had hardware that allowed for Synchronization control of the "develop station, and software that included available commands that could have been used to operate "The System" using Synchronization control on the "develop station". The applicant's argument is that the method of spin coating a developing solution at a "develop station" using the Synchronization control was not the subject of the commercial sale and steps for the programming were not established or known.

C) The current invention was the subject of the sale for the following reasons: It is well established in the semiconductor manufacturing art that hardware and a method used in coating one type of processing solution may be used in coating another type of processing solution. The software program that was used to program the Synchronization control of the spin coating of photoresist solution onto the substrate at the "coat station" must inherently use steps that would also be used in spin coating a developing solution onto the substrate at the "develop station". Such steps would include "controlling the process using serial process control wherein the process is controlled by sequentially executing a series of subroutines; interrupting the serial process control with an interrupt signal to execute a process command; the interrupt service routine is sent to central processing unit of the process control system, and wherein upon receiving the interrupt signal the central processing unit executes an interrupt service routine; wherein the interrupt service routine starts multiple timers, each timer measures a different duration, and at the end of each duration the interrupt service routine sends an interrupt signal to the central processing unit and the central processing unit executes a process command; wherein after executing the process command, the process control system returns to serial process control until it receives another interrupt signal; wherein the interrupt signal is a software or a hardware interrupt signal; wherein the hardware interrupt signal is sent from a supply system controller upon occurrence of a start of solution dispense or an end of solution dispense, or both, etc.. These steps must have been inherent in the Synchronization control of the "coat station" because they are basic to the Synchronization control of a

serial process and would include such steps as start and end of dispensing of the processing solution, start and end of rotation of the substrate, speed, acceleration and deceleration of the substrate in the spin coating of photoresist solution at the "coat station". These same basic steps would be used in using the Synchronization control to spin coat the developing solution at the "develop station". In other words, the conception of using the Synchronization control software with the already installed "develop station" hardware was already known because the conception or invention of using Synchronization control with a spin coating process was already known and used with the "coat station" by the sale of The System. The reduction to practice may not have occurred with the developing station, but that is not the requirement. The requirement is that the invention was ready for patenting at the time of the sale, not reduced to practice at the time of the offer for sale. Clearly the conception, the invention of using Synchronization control was already being used with the "coat station" and therefore was reduced to practice and ready for patenting.

The offer and the commercial of sale of "The System" on or before January 1999 included the invention by having the Synchronization control hardware and software for spin coating a processing solution onto a substrate. The commercial sale occurred at least one year before the critical date, May 31, 2000. The applicant is therefore barred from obtaining a patent for the claimed invention.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Akimoto et al. (US 5,923,915) has a method and apparatus for processing resist and in column 9, lines 61 – 67, teaches that "the embodiments described above cover the cases of a resist coating treatment and a developing treatment...can also be employed for other spinner type processing such as a washing-drying treatment".

Response Data

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Rutledge whose telephone number is (571) 272-2127. The examiner can normally be reached on Mon - Thurs, 6:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell Adams can be reached on (571) 272-2851. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D. Rutledge
Primary Examiner
Art Unit 2851

dr
4/06/2004